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TRANSMITTAL FORM

to be used for all correspondence after initial filing)

| | |
|------------------------|-----------------------|
| Application Number | 10/006,430 |
| Filing Date | December 10, 2001 |
| First Named Inventor | Mark J. Graham |
| Group Art Unit | 1635 |
| Examiner Name | Sean McGarry |
| Attorney Docket Number | ISIS0072-100/RTS-0341 |

Total Number of Pages in This Submission

ENCLOSURES (check all that apply)

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| <input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment / Response <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/ Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53 | <input type="checkbox"/> Assignment Papers (for an Application) <input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input checked="" type="checkbox"/> Power of Attorney with Revocation and Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) | <input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): Table A Statement Under 37 CFR 3.73(b) with executed Assignment |
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Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

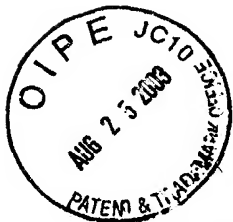
| | |
|-------------------------|------------------------------------------|
| Firm or Individual name | Paul K. Legaard, Registration No. 38,534 |
| Signature | <i>Paul K. Legaard</i> |
| Date | 21 AUGUST 2003 |

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313 on this date:

| | | | |
|-----------------------|------------------------------------------|------|----------------|
| Typed or printed name | Paul K. Legaard, Registration No. 38,534 | | |
| Signature | <i>Paul K. Legaard</i> | Date | 21 AUGUST 2003 |

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.




IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Assistant Commissioner for Patents
Washington, DC 20231

Sir:

POWER OF ATTORNEY WITH REVOCATION AND
CHANGE OF CORRESPONDENCE ADDRESS

I hereby revoke all previous powers of attorney or authorizations of agent given in the patents/applications identified in Table A attached hereto, and appoint  DER

BAR CODE 34138
PATENT TRADEMARK OFFICE

☒ Practitioners at Customer Number: 34138

as my/our attorney(s) or agent(s) to prosecute the patents/applications identified in Table A, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please change the Correspondence Address for the patent applications identified in Table A to:

☒ Practitioners at Customer Number: 34138

I am the:

☐ Applicant/Inventor.

☒ Assignee of record of the entire interest. (A statement under 37 CFR 3.73(b) is enclosed.)

Respectfully submitted,
ISIS PHARMACEUTICALS, INC.

Date: 7/22/2003

By: 

Name: B. Lynne Parshall
Title: Executive Vice President



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Assistant Commissioner for Patents
Washington, DC 20231

REC-1111
AUG 28 2003
TECH CENTER 1600/2003

Sir:

STATEMENT UNDER 37 CFR 3.73(b)

Applicant, **ISIS Pharmaceuticals, Inc.**, a corporation, states that it is:

☒ the assignee of the entire right, title, and interest of the patents/applications identified in Table A attached hereto.

The extent (by, percentage) of its ownership interest is 100% in the patents/applications identified in Table A.

☒ a copy of the pertinent assignment from the inventor(s) of the patent applications identified in Table A is enclosed herewith.

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Respectfully submitted,
ISIS PHARMACEUTICALS, INC.

Date: 7/22/2003

By: _____

Name: B. Lynne Parshall
Title: Executive Vice President

Table A

| Serial No. Patent No. Docket No. | Filing Date Issue Date | Inventor(s) | Examiner | Art Unit | Title |
|-----------------------------------------|--------------------------------------|--------------------|------------------|-------------|--------------------------------------------------------------------------------------|
| 09/577,902 6,284,538 ISIS0004-102 | May 24, 2000 September 4, 2001 | B. Monia et al. | M. Schmidt | 1635 | ANTISENSE INHIBITION OF PTEN EXPRESSION |
| 09/048,810 6,238,921 ISIS0052-101 | March 26, 1998 May 29, 2001 | L. Miraglia et al. | M. Shibuya | 1635 | ANTISENSE OLIGONUCLEOTIDE MODULATION OF HUMAN MDM2 EXPRESSION |
| 09/280,805 6,184,212 ISIS0052-102 | March 26, 1999 February 6, 2001 | L. Miraglia et al. | J. Epps | 1635 | ANTISENSE MODULATION OF HUMAN MDM2 EXPRESSION |
| 09/731,457 ISIS0053-100 | December 6, 2000 | I. Popoff et al. | J. Schultz | 1635 | ANTISENSE MODULATION OF DAMAGE SPECIFIC DNA BINDING PROTEIN 1, P127 EXPRESSION |
| 09/659,860 ISIS0054-100 | September 11, 2000 | H. Zhang et al. | J. Schultz | 1635 | ANTISENSE MODULATION OF CASPASE 7 EXPRESSION |
| 10/007,078 ISIS0055-100 | November 8, 2001 | D. Ward et al. | J. Schultz | 1635 | ANTISENSE MODULATION OF EIF2C1 EXPRESSION |
| 09/953,611 ISIS0056-100 | September 13, 2001 | D. Ward et al. | To Be Determined | 1635 | ANTISENSE MODULATION OF PROTEIN KINASE R EXPRESSION |
| 09/715,983 ISIS0057-100 | November 20, 2000 | B. Monia et al. | J. Zara | 1635 | ANTISENSE MODULATION OF PI3K P85 EXPRESSION |
| 09/344,521 6,100,090 ISIS0057-101 | June 25, 1999 August 8, 2000 | B. Monia et al. | J. Zara | 1635 | ANTISENSE INHIBITION OF PI3K P85 EXPRESSION |
| 09/954,679 ISIS0058-100 | September 12, 2001 | D. Ward et al. | K. Lacourciere | 1635 | ANTISENSE MODULATION OF RIBONUCLEASE L EXPRESSION |
| 09/484,617 6,303,374 ISIS0059-100 | January 18, 2000 October 16, 2001 | H. Zhang et al. | S. McGarry | 1635 | ANTISENSE MODULATION OF CASPASE 3 EXPRESSION |

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| Serial No. Patent No. Docket No. | Filing Date Issue Date | Inventor(s) | Examiner | Art Unit | Title |
|-----------------------------------------|-----------------------------------------|------------------|------------------|-------------|-------------------------------------------------------------------|
| 09/679,298 6,566,131 ISIS0060-100 | October 4, 2000 May 20, 2003 | L. Cowser | M. Schmidt | 1635 | ANTISENSE MODULATION OF SMAD6 EXPRESSION |
| 09/679,299 6,566,135 ISIS0061-100 | October 4, 2000 May 20, 2003 | A. Watt | J. Zara | 1635 | ANTISENSE MODULATION OF CASPASE 6 EXPRESSION |
| 09/853,768 6,444,466 ISIS0062-100 | May 10, 2001 September 3, 2002 | D. Ward et al. | J. LeGuyader | 1635 | ANTISENSE MODULATION OF HELICASE- MOI EXPRESSION |
| 10/001,863 ISIS0063-100 | November 19, 2001 | J. Karras et al. | To Be Determined | 1645 | ANTISENSE MODULATION OF TOLL-LIKE RECEPTOR 4 EXPRESSION |
| 09/865,993 ISIS0064-100 | May 25, 2001 | B. Monia et al. | J. Zara | 1635 | ANTISENSE MODULATION OF DUAL SPECIFIC PHOSPHATASE 5 EXPRESSION |
| 09/667,018 ISIS0065-100 | September 20, 2000 | H. Zhang et al. | J. Schultz | 1635 | ANTISENSE MODULATION OF CASPASE 2 EXPRESSION |
| 10/271,887 ISIS0066-100 | October 15, 2002 | H. Zhang et al. | To Be Determined | 1635 | ANTISENSE MODULATION OF CASPASE 9 EXPRESSION |
| 09/659,845 6,492,170 ISIS0066-101 | September 11, 2000 December 10, 2002 | A. Watt | A. Wang | 1639 | ANTISENSE MODULATION OF CASPASE 9 EXPRESSION |
| 10/309,362 ISIS0067-100 | December 3, 2002 | D. Ward et al. | To Be Determined | 1635 | ANTISENSE MODULATION OF RECQL5 EXPRESSION |
| 10/238,443 ISIS0067-101 | September 9, 2002 | D. Ward et al. | To Be Determined | 1635 | ANTISENSE MODULATION OF RECQL5 EXPRESSION |
| 09/798,185 ISIS0067-102 | March 1, 2001 | D. Ward et al. | K. Lacourciere | 1635 | ANTISENSE MODULATION OF RECQL5 EXPRESSION |
| 09/798,096 6,399,378 ISIS0068-100 | March 1, 2001 June 4, 2002 | D. Ward et al. | S. McGarry | 1635 | ANTISENSE MODULATION OF RECQL2 EXPRESSION |

| Serial No. Patent No. Docket No. | Filing Date Issue Date | Inventor(s) | Examiner | Art Unit | Title |
|-----------------------------------------|---------------------------------------|---------------------|------------------|-------------|--------------------------------------------------------------------------------------|
| 09/792,594 6,436,706 ISIS0069-100 | February 23, 2001 August 20, 2002 | D. Ward et al. | K. Lacourciere | 1635 | ANTISENSE MODULATION OF RECQL4 EXPRESSION |
| 09/793,807 ISIS0070-100 | February 23, 2001 | D. Ward et al. | J. Zara | 1635 | ANTISENSE MODULATION OF RECQL EXPRESSION |
| 09/358,381 6,020,199 ISIS0071-100 | July 21, 1999 February 1, 2000 | B. Monia et al. | M. Schmidt | 1635 | ANTISENSE MODULATION OF PTEN EXPRESSION |
| 10/006,430 ISIS0072-100 | December 10, 2001 | M. Graham et al. | S. McGarry | 1635 | ANTISENSE MODULATION OF CD81 EXPRESSION |
| 10/175,492 ISIS0073-100 | June 17, 2002 | K. Dobie et al. | To Be Determined | 1645 | ANTISENSE MODULATION OF PAZ/PIWI DOMAIN CONTAINING PROTEIN EXPRESSION |
| 10/199,221 ISIS0074-100 | July 18, 2002 | B. Monia et al. | J. Epps | 1635 | ANTISENSE MODULATION OF DUAL SPECIFIC PHOSPHATASE 6 EXPRESSION |
| 09/487,444 6,159,697 ISIS0075-100 | January 19, 2000 December 12, 2000 | B. Monia et al. | A. Wang | 1635 | ANTISENSE MODULATION OF SMAD7 EXPRESSION |
| 10/181,603 ISIS0075-101 | July 17, 2002 | B. Monia et al. | To Be Determined | 1651 | ANTISENSE MODULATION OF SMAD7 EXPRESSION |
| 09/732,199 6,379,960 ISIS0076-100 | December 6, 2000 April 30, 2002 | I. Popoff et al. | M. Schmidt | 1635 | ANTISENSE MODULATION OF DAMAGE- SPECIFIC DNA BINDING PROTEIN 2, p48 EXPRESSION |
| 09/920,668 6,482,644 ISIS0077-100 | August 1, 2001 November 19, 2002 | L. Cowserf | M. Schmidt | 1635 | ANTISENSE MODULATION OF DUAL SPECIFIC PHOSPHATASE 8 EXPRESSION |
| 09/922,146 6,566,133 ISIS0078-100 | August 1, 2001 May 20, 2003 | L. Cowserf | T. Gibbs | 1635 | ANTISENSE MODULATION OF DUAL SPECIFIC PHOSPHATASE 9 EXPRESSION |

| Serial No. Patent No. Docket No. | Filing Date Issue Date | Inventor(s) | Examiner | Art Unit | Title |
|-----------------------------------------|-----------------------------------|-----------------|------------------|-------------|-------------------------------------------------|
| 09/487,445 6,258,600 ISIS0079-100 | January 19, 2000 July 10, 2001 | H. Zhang et al. | M. Shibuya | 1635 | ANTISENSE MODULATION OF CASPASE 8 EXPRESSION |
| 10/181,177 ISIS0079-101 | July 12, 2002 | H. Zhang et al. | To Be Determined | 1632 | ANTISENSE MODULATION OF CASPASE 8 EXPRESSION |

DOCKET NO.: RTS-0341

Date of Deposit: 11/29/2007

A S S I G N M E N T

WHEREAS, we Mark J. Graham, residing at 2305 Ola Vista, San Clem, California 92672 and Kenneth Dobie, residing at 703 Stratford Ct., #4, Del Mar, California 92014 hereinafter referred to as the assignors, are the joint inventors of certain inventions or improvements for which we have made application for Letters Patent to the United States, identified as Case No. RTS-0341 entitled **Antisense Modulation of CD81 Expression**; filed concurrently herewith; and

WHEREAS, Isis Pharmaceuticals Inc. hereinafter referred to as the assignee, of 2292 Faraday Ave, Carlsbad, California 92008 is desirous of acquiring the entire right, title and interest in and to the said inventions or improvements and in and to the said application, and in, to and under any and all Letters Patent which may be granted on or as a result thereof in any and all countries:

NOW, THEREFORE, for and in consideration of the sum of One Dollar (\$1.00) to each of us in hand paid by said assignee, and other good and valuable consideration, the receipt of which is hereby acknowledged, we, the said assignors, have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over to said assignee, the entire right, title and interest in and to said inventions or improvements and said application and any and all continuations, divisions and renewals of and substitutes for said application, and in, to and under any and all Letters Patent which may be granted on or as a result thereof in the United States and any and all other countries, and any reissue or reissues or extension or extensions of said Letters Patent, and assign to and authorize said assignee, to file in our names applications for Letters Patent in all countries, the same to be held and enjoyed by said assignee, its successors, assigns, nominees or legal representatives, to the full end of the term or terms for which said Letters Patent respectively may be granted, reissued or extended, as fully and entirely as the same would have been held and enjoyed by us had this assignment, sale and transfer not been made.

AND we hereby covenant that we have full right to convey the entire interest herein assigned, and that we have not executed and will not execute any agreement in conflict herewith, and we further covenant and agree that we will each time a request is made and without undue delay, execute and deliver all such papers as may be necessary or desirable to perfect the title to said inventions or improvements, said application and said Letters Patent to said assignee, its successors, assigns, nominees, or legal representatives, and each of us agrees to communicate to said assignee or to its nominee all known facts respecting said inventions or improvements, said application and said Letters Patent, to testify in any legal proceedings, to sign all lawful papers, to execute all disclaimers and divisional, continuing, reissue and foreign applications, to make all rightful oaths, and generally to do everything possible to aid said assignee, its successors, assigns, nominees and legal representatives to obtain and enforce for its or their own benefit proper patent protection for said inventions or improvements in any and all countries.

DOCKET NO.: RTS-0341

AND we hereby authorize and request the Commissioner of Patents and Trademarks of the United States and any official of any country or countries foreign to the United States whose duty it is to issue patents on applications as aforesaid, to issue to said assignee, as assignee of the entire right, title and interest, any and all Letters Patent for said inventions or improvements, including any and all Letters Patent of the United States which may be issued and granted on or as a result of the application aforesaid, in accordance with the terms of this assignment.

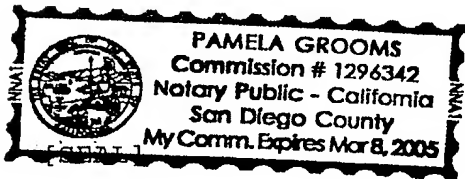
IN WITNESS WHEREOF, we have hereunto set our hands and seals.

Dated: 11/16/01

Mark J. Graham
Mark J. Graham

STATE OF California)
COUNTY OF San Diego) ss.

This 16th day of November, before me personally came the above-named Mark J. Graham, who executed the foregoing Assignment in my presence, and who acknowledged to me that he/~~she~~ executed the same of his/~~her~~ own free will for the purposes set forth therein.



Pamela Grooms
Notary Public

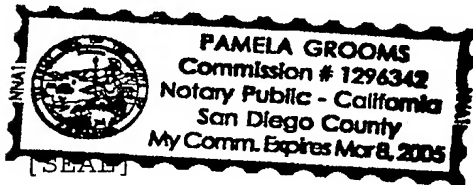
DOCKET NO.: RTS-0341

Dated: 11/28/01

Kenneth Dobie
Kenneth Dobie

STATE OF California)
COUNTY OF San Diego) ss.

This 28th day of November, 2001, before me personally came the above-named Kenneth Dobie, who executed the foregoing Assignment in my presence, and who acknowledged to me that he/she executed the same of his/her own free will for the purposes set forth therein.



Pamela Grooms
Notary Public